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EXAMINER

WOO, ISAAC M

ART UNIT PAPER NUMBER

2166

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/072,437

Applicant(s)

BOLT, THOMAS B.

Examiner

Isaac M. Woo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to Applicant's Amendment, filed on August 09, 2005 have been fully considered but are deemed moot in view of new ground of rejections below.

2. Claims 1-27 are pending.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1-11, 23-25 and 27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As set forth in MPEP 2106 (II) (A):

A. Identify and Understand Any Practical Application Asserted for the Invention

The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a

certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (*Brenner v. Manson*, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); *In re Ziegler*, 992, F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)). Accordingly, a complete disclosure should contain some indication of the practical application for the claimed invention, i.e., why the applicant believes the claimed invention is useful.

Apart from the utility requirement of 35 U.S.C. 101, usefulness under the patent eligibility standard requires significant functionality to be present to satisfy the useful result aspect of the practical application requirement. See *Arrhythmia*, 958 F.2d at 1057, 22 USPQ2d at 1036. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make the invention eligible for patenting. For example, a claim directed to a word processing file stored on a disk may satisfy the utility requirement of 35 U.S.C. 101 since the information stored may have some "real world" value. However, the mere fact that the claim may satisfy the utility requirement of 35 U.S.C. 101 does not mean that a useful result is achieved under the practical application requirement. The claimed invention as a whole must produce a "useful, concrete and tangible" result to have a practical application.

Regarding claims 1 and 23, a method for storing data can be implemented without computer or machine. Because the limitation of claim 1, "defining", "receiving", "storing", "retrieving", "compressing" and "re-storing" and claim 23, "transmitting", "compressing" and "re-storing", can be implemented by a human with a pencil, and a piece of paper for searching an electronic document. Thus, the languages of claims 1

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and 57 raise a question as to whether the claimed method is directed merely to an abstract idea that is not tied to a producing a concrete, useful, and tangible result to from the basis of statutory subject matter under 35 U.S. C. § 101. Therefore, the claimed invention is non-statutory subject matter. The claims should be amended to indicate that the subject matter is implemented by a computer, i.e., a computer implemented method.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 23, 25-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. For claim 23, newly added limitation "indiscriminately" is not supported from specification. For newly added claims 25-27, the limitation "in a non-duplicative manner" is not supported from specification.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 12-24 and 26-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakano et al (U.S. Patent No. 5,956,733, hereinafter, "Nakano").

With respect to claim 12, Nakano discloses, transmit data received from the input/output port to the backup storage device (34.1-34.3, archiver, fig. 4, col. 10, lines 45-67) during a backup period (data (backup data) is stored in archiver) and then reclaim storage space on the backup storage device during an idle period following the backup period by retrieving the data stored on the backup storage device (S2, extract request file from own archiver, fig. 22, col. 14, 59-67, fig. 31, col. 17, lines 32-62, fig. 36, col. 18, lines 53-67 to col. 19, lines 1-10), compressing the retrieved data (S3, compress data of extracted file, fig. 22, S3, fig. 31, col. 17, lines 32-62, col. 18, lines 53-67 to col. 19, lines 1-10), and then re-storing the compressed data on the backup storage device, see (S4, store compressed file into own archiver, fig. 22, fig. 28, fig. 31, S5, fig. 36, col. 17, lines 32-62, col. 18, lines 53-67 to col. 19, lines 1-10, archived file from archiver, 34.1-34.3, (backup data) is extracted and compressed and after compressing data, the compressed data is re-stored again archiver, 34.1-34.3).

With respect to claim 13, Nakano discloses, execute a software algorithm to compress the retrieved data, see (S3, compress data of extracted file, fig. 22, S3, fig. 31, col. 17, lines 32-62).

With respect to claim 14, Nakano discloses, a zip, a gunzip, a bzip; a bzip; a Lempel Ziv; and a LZS (Lempel Ziv Stac), see (compress data of extracted file, fig. 22, S3, fig. 31, col. 17, lines 32-62).

With respect to claim 15, Nakano discloses, software algorithm is stored in a memory associated with the controller, see (fig. 4, col. 10, lines 45-67).

With respect to claim 16, Nakano discloses, fiber channel controller coupled between the controller and the input/output port which comprises an optical transceiver, see (fig. 4, col. 10, lines 4-67).

With respect to claim 17, Nakano discloses, ethernet controller coupled between the controller and the input/output port which comprises an ethernet transceiver, see (fig. 4, col. 10, lines 4-67).

With respect to claim 18, Nakano discloses, network hub and bridge circuit coupled between the backup storage device and the controller, see (col. 1, lines 17-67 to col. 2, lines 1-67).

With respect to claim 19, primary storage location that allows transmission of uncompressed data from the primary storage location to the backup storage device, see (S4, store compressed file into own archiver, fig. 22, fig. 28, fig. 31, S5, fig. 36, col. 17, lines 32-62, col. 18, lines 53-67 to col. 19, lines 1-10, archived file from archiver, 34.1-34.3, (backup data) is extracted and compressed and after compressing data, the compressed data is re-stored again archiver, 34.1-34.3).

With respect to claim 20, Nakano discloses, fiber channel or ethernet, see (col. 1, lines 17-67 to col. 2, lines 1-67).

With respect to claim 21, Nakano discloses, storage attached network or network attached storage configuration, see (fig. 4, col. 10, lines 4-67).

With respect to claim 22, Nakano discloses, plurality of clients and servers coupled to the primary storage location through a client network, see (fig. 4, col. 10, lines 4-67).

With respect to claim 23, Nakano discloses, transmitting uncompressed data (S3, raw data, fig. 36) from the primary storage device (any storage from sharing storage group 25, fig. 4) to the backup storage device (34.1-34.3, archiver, fig. 4, col. 10, lines 45-67) during a backup window period (data (backup data) is stored in archiver during backup period), indiscriminately compressing the data during an idle period (compress data of extracted file, fig. 22, S3, fig. 31, col. 17, lines 32-62, col. 18, lines 53-67 to col. 19, lines 1-10) when uncompressed data is not being transmitted to the backup storage device (S4, fig. 31, after compressing, S103, fig. 31, the data is transmitted to archiver, backup storage, fig. 31, col. 17, lines 32-62, col. 18, lines 53-67 to col. 19, lines 1-10); and re-storing the compressed data on the backup storage device, see (S4, store compressed file into own archiver, fig. 22, fig. 28, fig. 31, S5, fig. 36, col. 17, lines 32-62, col. 18, lines 53-67 to col. 19, lines 1-10, archived file from archiver, 34.1-34.3, (backup data) is extracted and compressed and after compressing data, the compressed data is re-stored again archiver, 34.1-34.3).

Claims 26-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement as discussed above.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-11 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al (U.S. Patent No. 5,956,733, hereinafter, "Nakano") in view of Crighton (U.S. Patent No. 6,330,570).

With respect to claim 1, Nakano discloses, receiving data during the backup window period, see (34.1-34. 3, archiver; fig. 4, col. 10, lines 45-67) during a backup period (data (backup data) is stored in archiver); storing the data on the backup storage device during the backup window period, see (34.1-34. 3, archiver, fig. 4, col. 10, lines 45-67); retrieving the data stored on the backup storage device during the idle period after the backup window period, see (S2, extract request file from own archiver, fig. 22, col. 14, 59-67, fig. 31, col. 17, lines 32-62, fig. 36, col. 18, lines 53-67 to col. 19, lines 1-10); compressing the data retrieved from the backup storage device during the idle period, see (period (compress data of extracted file, fig. 22, S3, fig. 31, col. 17, lines 32-62, col. 18, lines 53-67 to col. 19, lines 1-10); and re-storing the data compressed during the idle period in compressed form on the backup storage device, see (S4, store compressed file into own archiver, fig. 22, fig. 28, fig. 31, S5, fig. 36, col. 17, lines 32-62, col. 18, lines 53-67 to col. 19, lines 1-10, archived file from archiver, 34.1-34.3, (backup data) is extracted and compressed and after compressing data, the compressed data is re-stored again archiver, 34.1-34.3). Nakano does not explicitly disclose, defining a duty

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cycle for the downloading of data to a backup storage device, the duty cycle having a backup window period and an idle period. However, Crighton discloses, "schedule backup job allows the backup operator to specify the times and dates for the proposed backup job. An exemplary display is shown in FIG. 3. As shown in FIG. 3, the backup operator can set the time to start the backup, and can specify whether the backup should happen on a daily basis or only on week days. In step 220, the GUI displays a further window, which allows the backup operator to specify at what time of day he would like the pre-backup check to operate. An exemplary display is illustrated in FIG. 4. As shown in FIG. 4, the time is set to 17:00, which is nearing the time when the backup operator might normally wish to go home. The later in the day this time is set for, the lower the risk that, between this time and the actual backup job time, a new problem will be encountered", see (col. 4, lines 26-41 and 215, fig. 2, fig. 3). This discloses schedule backup job GUI for backup schedule cycle. Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention was made to modify Nakano by incorporating defining a duty cycle for the downloading of data to a backup storage device, the duty cycle having a backup window period and an idle period with the system of Crighton. Thus, one having ordinary skill in the art at the time the invention was made would have found it motivated to use such a modification because that would provide Nakano's system the enhanced and scheduled auto-data backup method by setting up backup cycle in the data management system.

With respect to claim 2, Nakano discloses, compression of the data is performed using execute a software compression algorithm, see (S3, compress data of extracted file, fig. 22, S3, fig. 31, col. 17, lines 32-62).

With respect to claim 3, Nakano discloses, a zip, a gnuzip, a bzip; a bzip; a Lempel Ziv; and a LZS (Lempel Ziv Stac), see (compress data of extracted file, fig. 22, S3, fig. 31, col. 17, lines 32-62).

With respect to claim 4, Nakano discloses, comprising successively repeating the receiving and storing of data during the backup window periods and retrieving, compressing and storing compressed data on the backup storage device during successive duty cycles respectively, see (fig. 22, fig. 28, fig. 31, S5, fig. 36, col. 17, lines 32-62, col. 18, lines 53-67 to col. 19, lines 1-10, archived file from archiver, 34.1-34.3, (backup data)).

With respect to claim 5, Nakano discloses, emulated tape drive containing an array of hard drives, see (fig. 1, col. 8, lines 9-32).

With respect to claim 6, Nakano discloses, data is downloaded over a network from a primary storage location, see (fig. 4, col. 14, lines 33-59), see (fig. 1, col. 8, lines 9-32).

With respect to claim 7, Nakano discloses, data is downloaded over a fiber-channel connection between the primary storage location and the backup storage device, see (col. 1, lines 17-67 to col. 2, lines 1-67).

With respect to claim 8, Nakano discloses, data is downloaded over an ethernet connection between the primary storage location and the backup storage, see (fig. 4, col. 10, lines 4-67).

With respect to claim 9, Nakano discloses, primary storage location and the backup storage device are part of a storage array network, see (fig. 4, col. 10, lines 4-67).

With respect to claim 10, Nakano discloses, primary storage location and the backup storage device are part of a network attached storage configuration, see (col. 1, lines 17-67 to col. 2, lines 1-67).

With respect to claim 11, Nakano discloses, backup storage device is directly electrically connected to a server, see (col. 1, lines 17-67 to col. 2, lines 1-67).

Claim 25 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement as discussed above.


Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isaac M. Woo whose telephone number is (571) 272-4043. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam can be reached on (571) 272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

IMW
October 20, 2005


JEAN M. CORRIELUS
PRIMARY EXAMINER